International Ship and Port Facility Security (ISPS) Code Implementation and Evaluation of SOCPF Certification in Facing Security Threats at Batu Ampar Port

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Abstract. This study analyzes the implementation of the International Ship and Port Facility Security (ISPS) Code and the evaluation of Statement of Compliance of a Port Facility (SOCPF) certification in addressing security threats at Batu Ampar Port, Batam. Using a qualitative approach and the Miles and Huberman data analysis model, the research interviewed three key informants: the Batu Ampar Port PFSO, Batam KSOP, and an ISPS Expert. The findings indicate that the implementation of the ISPS Code through SOCPF certification, supported by risk assessments, comprehensive security plans, personnel training, and regular drills and audits, has significantly enhanced port security. This compliance has not only reduced security incidents like unauthorized access and theft but also increased the confidence of international trading partners and strengthened Batam's position as a strategic maritime hub in Indonesia. This research concludes that a continuous commitment to implementing the ISPS Code is crucial for maintaining the port's competitiveness and operational stability.

Keywords: ISPS Code, SOCPF Certification, Batu Ampar Port, Maritime Security, Security Threats.

1. Introduction

The increasing maritime security threats, such as terrorism and cross-border crimes, demand the implementation of effective international security standards. The International Ship and Port Facility Security (ISPS) Code serves as a global framework to prevent and manage these risks. The implementation of the ISPS Code in Indonesian ports, including Batam, is crucial given its strategic position in international trade routes.Batam Port, with its role as one of Indonesia's main maritime hubs, faces a major challenge in maintaining operational stability amidst high maritime security risks. As global trade activities increase, there is an urgent need to ensure that ports in this region comply with international security standards to reduce potential threats and enhance the trust of trading partners.

One of the efforts undertaken is through security certification mechanisms, including the Statement of Compliance of a Port Facility (SOcPF), to ensure that these ports are capable of effectively addressing potential security risks. The International Ship and

Port Facility Security (ISPS) Code is an international framework adopted by the International Maritime Organization (IMO) in 2002, as part of the amendments to the International Convention for the Safety of Life at Sea (SOLAS) 1974.

In the Indonesian context, the ISPS Code is very important because the country has more than 100 ports involved in international trade. The implementation of the ISPS Code in Indonesia aims to improve port security, which directly contributes to national and regional economic stability. Previous studies show that the implementation of the ISPS Code successfully improved port efficiency and strengthened the international competitiveness of ports[1].

One of the strategic ports that is the focus of this implementation is Batam, which is located on major world trade routes and plays a role as an economic gateway for the nation. As one of the main ports located in a strategic area, Batam has a significant role in supporting the national economy. Its proximity to the Strait of Malacca, one of the world's busiest shipping lanes, makes Batam Port a vital point in the global supply chain. However, this position also increases the risk of security threats, such as smuggling and other illegal activities. The following table presents data reports related to port security conditions before the implementation of the ISPS Code, conducted by the assessor team from RSO Bina Sena.

Table 1 Port security conditions before ISPS Code implementation

Code	Threat	High Probability	Medium Probability	Low Probability
A-1	Damage to port facilities or ships, destruction, or demolition of port facilities or ships, for example by using explosives, arson, sabotage, or vandalism (B.15.11.1)	-	-	✓
A-2	Piracy or hostage-taking (ISPS B.15.11.2), i.e., piracy or hostage-taking of ships or ship's crew or port workers	-	-	✓
A-3	Damage and manipulation of cargo, main ship equipment or systems, or ship supplies (ISPS	-	-	✓

	B.15.11.3), i.e., manipulation of cargo, for example by damaging or altering cargo contents so that they do not conform to documents, damage or disruption to main ship systems or equipment			
A-4	Unauthorized access or use by unauthorized persons, including stowaways, i.e., persons entering restricted areas without permission, including fishermen, street vendors, residents, or illegal workers in the port environment, or passengers or guests entering ships or port areas without permission	✓	✓	-
A-5	Smuggling of weapons or equipment, including weapons of mass destruction (ISPS B.15.11.5), i.e., unauthorized entry and smuggling of firearms, explosives, or dangerous materials and equipment	-	-	✓
A-6	Use of ships to carry persons or equipment to damage or attack (ISPS B.15.11.6), i.e., use of ships to transport persons or	-	✓	✓

	equipment intended to damage or attack port facilities or other ships, including the use of ships for other crimes such as piracy and theft			
A-7	Use of ships as weapons or tools for damage (ISPS B.15.11.7), i.e., use of ships as weapons or tools for damage, either against port facilities or against other ships	-	-	✓
A-8	Blocking of roads, gates, access points, and fairways into the port (ISPS B.15.11.8), i.e., blocking of entrance roads or entry gates, including fairways from the sea	✓	✓	-
A-9	Labor or worker strikes, and mass riots, i.e., labor or worker strikes, including demonstrations and mass riots or residents around the port	✓	✓	-
A-10	Theft, i.e., theft of goods on board ships or theft of port equipment or facilities	✓	✓	-
A-11	Smuggling, i.e., entry of goods, tools,	-	-	✓

	weapons, and dangerous materials including narcotics

Based on the table above, it can be concluded that generally, the types of threats occurring at Batu Ampar Port are theft, damage to port facilities, unauthorized access by unauthorized persons such as fishermen, street vendors, and other threats. Meanwhile, other types of threats such as piracy, smuggling of firearms, and dangerous materials have a medium probability. Other threats such as smuggling of biological or chemical weapons, weapons of mass destruction, and nuclear attacks have a low probability.

The implementation of the ISPS Code in Batam ports through the Statement of Compliance of a Port Facility (SOcPF) certification by Biro Klasifikasi Indonesia (BKI) is a strategic step to ensure that these ports are capable of facing complex security threats. With the implementation of the ISPS Code, ports in Batam not only protect maritime activities from potential disruptions but also increase the confidence of international trading partners in Indonesian ports as a whole.PT. Biro Klasifikasi Indonesia (BKI) plays a key role in the implementation of the ISPS Code in Batam, particularly through the Statement of Compliance of a Port Facility (SOcPF) certification process. As a nationally and internationally recognized classification body, BKI is tasked with ensuring that ports and related facilities in Batam comply with maritime security standards set by the International Maritime Organization (IMO).

Through comprehensive security evaluations and audits, BKI helps port operators identify potential risks, develop security plans, and ensure their readiness to face maritime security threats. With high international trade activity in Batam, BKI's role becomes very important in increasing the confidence of global trading partners in ports in the region.In addition, BKI also contributes to providing training and technical assistance to stakeholders in Batam to ensure consistent and effective implementation of the ISPS Code. This not only supports maritime security but also strengthens Batam's position as a strategic trade hub in Indonesia. Given this urgency, researchers are interested in conducting research on "The Implementation of the ISPS Code in SOcPF Certification by BKI against Potential Port Security Threats in Batam."

2. Research Methods

This research was conducted at Batu Ampar Port, Batam, focusing on the implementation of the ISPS Code. This research uses a qualitative approach with a purposive sampling technique to determine three key informants: the PFSO of BUP Port, KSOP Batam, and an ISPS Expert, who were selected based on their expertise, strategic position, and competence. Data collection was carried out through direct observation in the field and in-depth interviews with the informants. The collected data was then analyzed using the Miles and Huberman model, which includes stages of data collection (interview transcription), data reduction (selection and organization), data presentation (in

the form of brief descriptions, tables, charts, or graphics), and drawing conclusions that answer the research problem formulation.

2.1 Research Informants/Subjects

In this research, the researcher determined informants using a Purposive Sampling technique by setting the following criteria:

a. Respondents possess expertise and direct experience in maritime security and ISPS Code.
b. Respondents hold strategic positions within the port management and regulation structure.
c. Respondents serve as consultants or experts with specific competence in the ISPS Code.

The determined informants are as follows:

Table 2 Research Informants

No	Position / Role	Description
1	PFSO BUP Port	Port Facility Security Officer
2	KSOP Batam	Regulator
3	ISPS Expert	Expert / Consultant

2.2 Data Collection Techniques

Data collection technique is the most important step in research because the main objective of research is to obtain data. Observation and interviews were used as data collection techniques in this study to obtain in-depth information from informants regarding the process and challenges of swiftlet nest raw material management. The data collection techniques are as follows:

a. Observation is a data collection technique where the author observes subjects in their natural environment without intervention. This technique aims to collect objective data about behaviors, interactions, and naturally occurring events.
b. Interview is a data collection technique where the author directly asks questions to respondents to obtain in-depth information about opinions, experiences, or perceptions. This technique can be structured depending on the research objectives.

2.3 Data Analysis Techniques

In this research, the researcher used data analysis techniques with the Miles and Huberman model. The data analysis techniques are as follows:

a. Data Collection

In this section, the researcher converts interview results in the form of voice recordings into text (transcripts), then collects data from the field and arranges the data according to the source of information.

b. Data Reduction

Data reduction is a form of analysis that categorizes, discards unnecessary data sources, and organizes data so that it can provide a sharper picture of the research results.

c. Data Presentation

In data presentation, the researcher conducts analysis in the form of matrices, networks, charts, or graphs. In this qualitative research, data presentation is done in the

form of brief descriptions, tables, charts, and relationships between categories. This makes the research results easier to understand.

d. Drawing Conclusions

Conclusions are drawn from all research results, where in qualitative research, these conclusions can answer the research questions formulated from the beginning.

3. Research Results

3.1 Interview results

Based on the interviews conducted by the researcher, the data reduction results can be seen in the following table:

Table 3 Interview results

Informant	Position	Interview Excerpt	Theme	Sub-Theme	No.
R1	Batu Ampar Port PFSO	Q: What are the main steps taken in the implementation of the ISPS Code at Batam Port? A: The main steps for ISPS Code implementation are security risk assessment, development of port security plans, personnel training, and supervision and monitoring.	ISPS Code Implementation	Implementation Steps	1
	ISPS Expert	Q: What are the main steps taken in the implementation of the ISPS Code at Batam Port? A: Implementation is mandatory for ports that interact with ISPS Code compliant vessels. They must prepare SOPs, training, monitoring, and audits.		Obligation and Eligibility	2
	Batam KSOP	A: The port must meet security standards such as personnel training (IMO Courses), perimeter fences, CCTV, and security posts.		Physical Security Standards	3
R2	Batu Ampar Port PFSO	A: Common threats include theft, unauthorized access, and smuggling. Supervision is enhanced with CCTV and routine patrols.	Security Threats	Types of Threats and Countermeasures	4
	ISPS Expert	A: Evolving threats include anarchist demonstrations, sabotage, theft, psychotropic smuggling, and even cyber attacks and drones.	Modern Threats and Global Trends		5

	Batam KSOP	A: Before the ISPS Code was implemented, many unknown people entered. After implementation, everyone must be identified and documented.		Comparison Before and After	6
R3	Batu Ampar Port PFSO	A: The SOCPF is important because it guarantees international security standards. It is valid for 5 years, with a requirement for 4 drills per year and an annual audit.	SOCPF Certification	Requirements and Execution	7
	ISPS Expert	A: The SOCPF is important because it ensures the port is secure and internationally recognized. If it's not compliant, it could be banned.		Strategic Impact	8
	Batam KSOP	A: The KSOP is responsible for conducting periodic verifications: initial, intermediate, and renewal. The evaluation focuses on access control and the coastline.	Implementation Evaluation	Audit and Verification	9

3.2 Simulation: The Journey to Obtaining a Statement of Compliance of a Port Facility (SOCPF)

The process for certifying a Statement of Compliance of a Port Facility (SOCPF) is a structured cycle that ensures a port facility meets the international security standards set by the ISPS Code. This process is strictly regulated by Minister of Transportation Regulation Number 51 of 2021 (PM 51 of 2021).

A. Preparation and Documentation (Initiation)

Fig 1. PFSO and Internal Auditor training

This is the initial stage where the port facility operator prepares all prerequisites before submitting an application.

1. Port Facility Security Assessment (PFSA/PAK) Development:
    - An internal security team or an independent consultant conducts a comprehensive analysis of potential security threats (e.g., theft, terrorism, sabotage, smuggling) and the facility's vulnerabilities.
    - The results of this analysis form the basis for developing the security plan.
2. Port Facility Security Plan (PFSP/RKFP) Development:
    - Based on the PFSA results, a detailed plan is created, outlining security procedures and measures for each security level (Level 1, 2, and 3).
    - This document includes: access control policies, surveillance systems, incident response procedures, and personnel assignments.
3. Appointment and Training of the PFSO:
    - The operator appoints a Port Facility Security Officer (PFSO) who is responsible for the implementation and maintenance of the PFSP.
    - The PFSO and other key personnel must complete certified training recognized by the IMO or a relevant authority.

B. Application Submission

The port facility formally submits a certification application to the Director General of Sea Transportation through the Directorate of Sea and Coast Guard (KPLP).

1. Documents to be Submitted:
    - An official application letter.
    - A copy of the verified PFSA/PAK.
    - A copy of the approved PFSP/RKFP.
    - Copies of the training certificates for the PFSO and security personel.
    - The official PFSO appointment letter.

C. Comprehensive Verification and Assessment

Fig 2. Field Verification (Physical and Procedural)

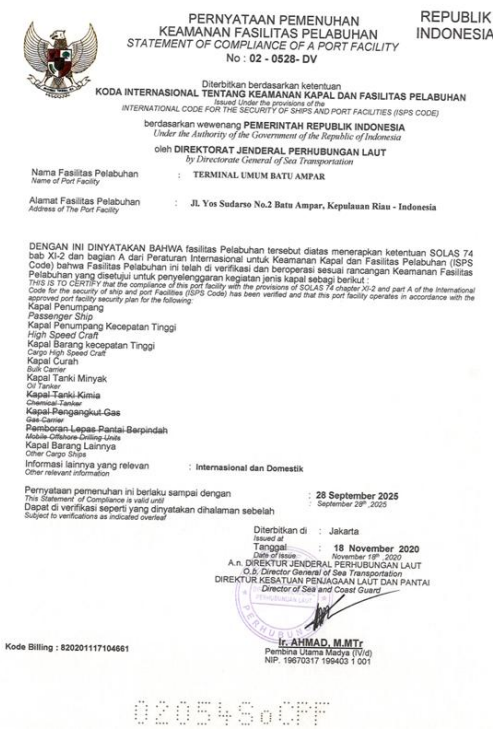
A verification team from the relevant authority (usually the KPLP Directorate) conducts a thorough evaluation to ensure the port facility is genuinely ready.

1. Administrative Verification (Documents):
    - The team checks the completeness, validity, and compliance of all submitted documents with ISPS Code standards.
    - The focus is on the details of the procedures, policies, and resource availability outlined in the PFSP.
2. Field Verification (Physical and Procedural):
    - The team conducts an on-site inspection to validate the implementation on the ground.
    - Physical Check: Security infrastructure (fences, lighting, CCTV), access control systems, and communication equipment.
    - Procedural Check: The readiness of personnel, their ability to respond to emergency scenarios, and the effectiveness of communication among teams.

D. Issuance of the SOCPF Certificate

Based on the verification results, which prove that the port facility has met all the specified requirements, the Director General of Sea Transportation officially issues the Statement of Compliance of a Port Facility (SOCPF).

This certificate is a crucial document that demonstrates the port's adherence to international security standards in accordance with the ISPS Code. Once issued, the certificate is valid for five years, affirming the port facility's long-term commitment to maritime security.



PERNYATAAN PEMENUHAN
KEAMANAN FASILITAS PELABUHAN
STATEMENT OF COMPLIANCE OF A PORT FACILITY
No : **02 - 0528- DV**

REPUBLIK INDONESIA

Diterbitkan berdasarkan ketentuan
KODA INTERNASIONAL TENTANG KEAMANAN KAPAL DAN FASILITAS PELABUHAN
Issued Under the provisions of the
INTERNATIONAL CODE FOR THE SECURITY OF SHIPS AND PORT FACILITIES (ISPS CODE)
berdasarkan wewenang **PEMERINTAH REPUBLIK INDONESIA**
Under the Authority of the Government of the Republic of Indonesia
oleh **DIREKTORAT JENDERAL PERHUBUNGAN LAUT**
by Directorate General of Sea Transportation

Nama Fasilitas Pelabuhan : **TERMINAL UMUM BATU AMPAR**
Name of Port Facility

Alamat Fasilitas Pelabuhan : **Jl. Yos Sudarso No.2 Batu Ampar, Kepulauan Riau - Indonesia**
Address of The Port Facility

DENGAN INI DINYATAKAN BAHWA fasilitas Pelabuhan tersebut diatas menerapkan ketentuan SOLAS 74 bab XI-2 dan bagian A dari Peraturan Internasional untuk Keamanan Kapal dan Fasilitas Pelabuhan (ISPS Code) bahwa Fasilitas Pelabuhan ini telah di verifikasi dan beroperasi sesuai rancangan Keamanan Fasilitas Pelabuhan yang disetujui untuk penyelenggaraan kegiatan jenis kapal sebagi berikut :
THIS IS TO CERTIFY that the compliance of this port facility with the provisions of SOLAS 74 chapter XI-2 and part A of the International Code for the security of ship and port Facilities (ISPS Code) has been verified and that this port facility operates in accordance with the approved port facility security plan for the following

Kapal Penumpang
Passenger Ship
Kapal Penumpang Kecepatan Tinggi
High Speed Craft
Kapal Barang kecepatan Tinggi
Cargo High Speed Craft
Kapal Curah
Bulk Carrier
Kapal Tanki Minyak
Oil Tanker
~~Kapal Tanki Kimia~~
~~*Chemical Tanker*~~
~~Kapal Pengangkut Gas~~
~~*Gas Carrier*~~
~~Pemboran Lepas Pantai Berpindah~~
~~*Mobile Offshore Drilling Units*~~
Kapal Barang Lainnya
Other Cargo Ships

Informasi lainnya yang relevan : **Internasional dan Domestik**
Other relevant information

Pernyataan pemenuhan ini berlaku sampai dengan : **28 September 2025**
This Statement of Compliance is valid until : *September 28th ,2025*
Dapat di verifikasi seperti yang dinyatakan dihalaman sebelah
Subject to verifications as indicated overleaf

Diterbitkan di : Jakarta
Issued at
Tanggal : **18 November 2020**
Date of Issue : *November 18th ,2020*
A.n. DIREKTUR JENDERAL PERHUBUNGAN LAUT
O.b. Director General of Sea Transportation
DIREKTUR KESATUAN PENJAGAAN LAUT DAN PANTAI
Director of Sea and Coast Guard

Ir. AHMAD, M.MTr
Pembina Utama Madya (IV/d)
NIP. 19670317 199403 1 001

Kode Billing : 820201117104661

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Fig 3. Issuance of the SOCPF Certificate

E. Compliance Maintenance and Periodic Audits (A Continuous Cycle)

Fig 4. Documentation of Table Top Exercise/Drill at Batu Ampar Port

Certification is not the end goal but the beginning of an ongoing commitment. The port facility must continuously maintain and improve its security standards.

1. Drills and Exercises:
    - Drills: Routine drills (at least once every 3 months) to test a single aspect of security (e.g., a bomb threat response).
    - Exercises: Full-scale exercises (at least once a year) that involve various parties (ships, authorities, security teams) to simulate complex scenarios.
2. Intermediate Verification:
    - Mandatory verification conducted between the second and third year of the SOCPF's validity to ensure continuous compliance.
3. Annual Verification:
    - Internal or external audits are conducted annually to review the effectiveness of the PFSP and recommend improvements.
4. Renewal Verification:
    - The same verification process as in Phase 3 must be repeated before the SOCPF expires to obtain a new certificate.

Conclusion

The implementation of the ISPS Code at Batu Ampar Port, Batam, has proven effective, significantly enhancing maritime security, port operations, and stakeholder confidence through strategic risk assessment, comprehensive security plans, robust personnel training, and strict monitoring. SOCPF certification and regular joint exercises, including simulations of real threats, have fortified inter-agency coordination and reduced security incidents, thereby boosting the port's regional and global competitiveness. Moving forward, continuous improvements in technology-based surveillance, adaptive human resource training for evolving threats (including cyber), and strengthened cross-sector coordination through drills and routine evaluations are crucial. Future research should include comparative studies and a deeper focus on cyber security and stakeholder roles to further optimize ISPS Code implementation.

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